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INTERNATIONAL BULLETIN
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1943 Nos. 11 & 12

DISCOVERIES AND CURRENT EVENTS *

ITALY.

The Olive Fly (*Dacus oleae*) on the Tuscan Littoral during 1942 †

In this communication are reported the observations effected in 1942 on the degree of infestation by *Dacus oleae* in the olive-groves in the provinces under the jurisdiction of the Royal Phytopathological Observatory of Pisa, namely, those of Pisa, Leghorn and Grosseto, where olive production was abundant.

Inspections were carried out in the Province of Pisa, with the Head of the Provincial Inspectorate of Agriculture (Prof. Del Vecchio) ; in the Province of Leghorn, with the Head of the Provincial Inspectorate of Agriculture (Prof. Bassi) and with the Sub-Director of the Fascist Farmers' Union (Dr Mattioli) ; in the Province of Grosseto, with the imspector of the Provincial Inspectorate of Agriculture (Dr Guidi) and with the Head of the Bureau of the Economic Association for Olive-growing.

Inspections took place during November : the 21st in the Province of Pisa, the 27th in the Province of Grosseto, and the 30th in that of Leghorn.

In the Province of Pisa, observations were extended to the olive-groves in the communes of S. Giuliano Terme, Calci, Bientina, Buti and those in the zone of the plain of Pontedera. In these zones, the olives fallen to the ground and those on the tree showed no olive fly infestation. At Calci, in the olive-grove of Marquis Mazzarosa, only one olive, among those lying on the ground, was found to contain an empty puparium of *Dacus*.

In the Province of Grosseto, on the Badiola farm (situated about 12 km. from the sea), approximately 10 per cent. infestations was observed in the varieties 'Moraiolo' and 'Correggiolo' (and about 30 per cent. in the olives fallen from the tree).

In the Plain of Castiglione della Pescaia (Orsini property), about 2 km. from the sea, on the plain, soil of average consistency, deep, the olives showed an infestation of 85 per cent., those of the variety 'Olivastra' (with small fruits) 90 per cent., olives on the ground 100 per cent. In the Poggiocavallo zone, in the vicinity of the Ombrone River, 3 to 5 per cent. infestation was noted.

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* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from Prof. GIUSEPPE RUSSO, Director of the Royal Phytopathological Observatory, Entomological Division, Pisa, Italy.

On the coastal part of Follonica (Bicocchi Bros. farm), situated at about 100 metres from the sea and at altitude of approximately 10-12 metres, the different olive varieties showed the following percentages of infestation : 'Olivastra' or 'Seggiacina' : 90 per cent. (in the part exposed to the wind, 20 per cent.) ; 'Moraiolo ': 80 per cent. ; 'Correggiolo' : 60 per cent. (in the part exposed to the wind, 30 per cent.) ; "Razzo' : 90 per cent. ; 'Lazzaro' : 50 per cent. ; 'Frantoiano' : 75 per cent.

In the Province of Leghorn in the maritime zone of Antignano, in the olive-groves protected on the north by the hills, the 'Moraiolo' variety showed 10 per cent. infestation. On the coastal zone of Rosignano, in the olive-groves on clayey soil, infestation amounted to 15 per cent. In the Bibbona olive-groves, at about 4 km. from the sea and at altitude of approximately 100 m. above sea-level, the olives were not attacked. In the olives of Castagneto Carducci, at about 8 km. from the sea and and at an altitude of some 100 m., olives of the ' Moraiolo ' variety showed infestation of approximately 10 per cent. In the olive storehouse at the oil-crusher belonging to Count della Gherardesca, with several quintals of olives on the trays, 10 flies were captured on the panes of the windows. In the cases of olives arriving from the groves, in the open a young adult *Dacus*, just emerged, was observed. These olives showed approximately 10 per cent. infestation, while those collected from the ground about 30 per cent.

The olive trees situated near the road, covered with the dust from same, were severely attacked by the oleander scale (*Aspidiotus hederae*) on the fruits, leaves and young branches ; infestation of black scale (*Coccus* [*Saissetia*] *oleae*) and sooty blotch was observed on the leaves and branches.

In the Donoratico zone, Serristori property, near the sea — ground flat, of average consistency, deep, fresh and irrigated — where with the olive-trees, catch-crops of tomatoes and cauliflower are grown, the olives of the variety 'Frantoiano' showed an infestation of approximately 80 per cent. ; of the variety 'Moraiolo', 50 per cent., those fallen to the ground, 95 per cent.

In the Piombino zone, approximately 20 per cent. of the trees of the 'Moraiolo' variety were infested.

The following conclusions are drawn from the inspections carried out in 1942·

(1) In the Province of Pisa, infestation in the flat coastal zone was sporadic.

(2) In the Province of Leghorn, in the low hilly zone and not more than 10 km. from the sea, about 10 per cent. infestation was found. In the coastal zones of the plain near the sea, with dry clayey soil, infestation was about 20 per cent., while in the olive-groves situated in corresponding zones but with light fresh soil, infestation was higher (50 to 80 per cent.).

(3) In the Province of Grosseto, 3-5 per cent. infestation was found in the low hilly zones at about 12-15 km. from the sea ; 10 per cent. in the flat zones some ten km. from the sea ; 30 to 90 per cent. (according to the nature of the soil, humidity, wind and variety) in the zones of the plain and near the sea.

(4) The olive varieties most severely infested by the olive fly were 'Seggiacina', 'Punteruolo' and ' Moraiolo' ; those least attacked were ' Leccino' and 'Lazzaro'.

NOTA. — In 1941, a poor year for olives in the Tuscan coastal region, in the olive-grove of the Pisa Faculty of Agriculture, the olive crop (December) showed the following percentage of olives infested by the fly: —

Variety 'Razzo'	3	per cent.
» 'Leccino'	6	» »
» 'Moraiolo'	7	» »
» 'Punteruolo'	11	» »

In 1940 a year with high yields, in the olive-groves of the Calci, Bientina and Buti zone, in December few olives were attacked by *D. oleae*.

SWITZERLAND.

The Colorado Beetle (*Leptinotarsa decemlineata*) in French Switzerland *

Situation on August 1, 1943.

The month of July marked, in the low-lying regions, the transition of the spring generation to the summer generation. This transition was especially perceptible this year in the majority of the regions which had been heavily contaminated; following the rains of the first fortnight of the month, the larvae became more and more rare and, after mid July, the adult insects recommenced to appear in sometimes fairly considerable numbers. This transition from one generation to another, however, was not so distinct everywhere and several districts continued to report both adults and larvae of different sizes. In the mountains, Jura and the fore-Alps, invasion everywhere was late and very weak and the development of the parasite very irregular.

The following data from the cantonal experts sum up the situation on August 1 in French Switzerland.

Genève. — The early and mid-early potatoes had for the most part been lifted. On the tops of the mid-late and late varieties insects were found in all stages of development, particularly in the severely infested regions of Avully, Cartigny, Plaine de l'Aire and Dardagny. There are now an enormous quantity of adult insects throughout the territory of the canton.

Vaud. — Following the first treatment, foci reported in some communes have been completely wiped out. From mid July insects of the 2nd generation were reported in various districts. After a few stormy days, chiefly from July 19 to 24, a strong emergence of perfect insects was observed in all the regions severely contaminated at the beginning of the campaign. At the end of the month a few adult larvae were still found here and there.

Neuchâtel. — The development of the Colorado beetle has not undergone any appreciable change. Cressier and Landeron remain the regions the most

* Communication from the Federal Experiment and Seed Testing Station, Lausanne (Mont Calme), Switzerland.

severely attacked. On the other hand, the regions of Cortaillod and Bevaix which were badly infested improved after carrying out treatments and scouting. In the mountainous districts, the new foci reported were generally of no great importance and were easily destroyed.

Bernese Jura. — In the plain the larvae developed rapidly and numerous cases of insects of the new generation have already been reported. It is not unusual at present to find in the potato fields, insects, eggs, larvae of all sizes and even nymphs. In the mountains, development is greatly retarded and much less important.

Fribourg. — In general, infestation was more severe than in the previous year in the Broye and Lake districts. The first foci of larvae were found in the Glâne district. In Gruyère, the commune of Grandvillard was heavily infested by the middle of July and treatments were organized in co-operation.

Valais. — The importance of the foci in the Rhône Plain has diminished. On the other hand, isolated foci of adult insects and larvae have been found increasingly higher up in the valley; these have been reported, among other places, at Susten, Montana, Louèche, Gampel, Hohtenn, Niedergesteln, Rarogne and Naters. All these small foci were rapidly treated and destroyed.

The number of communes invaded and the foci reported in Switzerland is indicated in the following table.

In French Switzerland: —

	Communes attacked	Number of foc
Genève	45	widespread
Vaud	322	»
Neuchâtel	56	»
Bernese Jura	146	»
Fribourg	161	5735 + d
Valais	19	134 + d
TOTAL	749	widespread

In German Switzerland: —

	Communes attacked	Number of foci		Communes attacked	Number of foci
Bern	187	4790 + d	Schwyz	14	53
Solothurn	83	15476	Unterwald	6	24
Basel	60	2283 + d	Uri	3	3
Argau	154	2849	Glarus	3	10
Luzern	47	251	Appenzell	—	—
Zürich	69	387	St Gallen	25	307
Schaffhausen	20	144	Graubünden	—	—
Thurgau	17	23	Ticino	2	24
Zug	5	36			
			TOTAL	695	26660

(+ d = widespread in some communes)

Comparing these figures with those of August 1, 1942, a very decided diminution in the extension of the Colorado beetle is seen : in nearly all the cantons the number of cantons invaded is lower than in the previous year. Does this depend on the warm and relatively dry weather which we have again enjoyed or on the fact that treatments could be applied practically everywhere and under good conditions ? It is probable, as already observed the previous year, that these two causes acted on the multiplication and spread of the Colorado beetles.

Treatments with arsenates or with Gésarol were continued up to the middle of July. In most places one treatment, carried out at the right moment, according to the instructions of the cantonal services, was sufficient to protect the crops ; in badly infested regions, however, a second general treatment had to be effected during July. In many regions, particularly in the mountains, the foci remained small and were easily destroyed. Examination of potato fields by school-children was continued, according to district, up to the middle of July. We cannot but stress, once again, the very considerable utility of these inspections in tracking the foci and facilitating their destruction.

At present, in many regions, the adult insects will probably appear in large numbers on late potato varieties ; they should be destroyed before the development of the second generation by treatments with Gésarol or, in the case of small plots, by collection by hand. Although the potato crops, in general, have not suffered through Colorado beetle attack this year and although the crops are now out of danger, it is very important to continue control measures by every means possible in order to avoid more extensive invasions next spring.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — An Ordinance of March 2, 1943 regulates the distribution and use of machines and equipment for seed treatment. (*Reichs-Pflanzenschutzblatt*, Berlin, Juli 1943, 1. Jahrg., Nr. 1, S. 5).

*** An ordinance dated March 5, 1943 prolongs, for the duration of the war, the shooting season for magpies up to January 31. (*Ibid.*, S. 5).

*** A Decree of March 6, 1943 extends to carrier pigeons the stipulations according to which, during certain periods, pigeons should be kept in enclosed areas so as to prevent them from invading the fields and gardens. (*Ibid.*, S. 2).

*** An Ordinance of April, 6, 1943 brings some slight modifications to the provisions regarding the use of very toxic preparations [see this *Bulletin* 1936, No. 8, p. 173]. (*Ibid.*).

* * * According to the Notification of March 8, 1943, the list published an April 20, 1942 of the communes contaminated by grape phylloxera [*Dactylosphaera vitifolii*) and of those suspected or in danger of being contaminated, continues to be in force. (*Ibid.*, S. 4).

* * * By Ordinance of the Reich Farmers' Leader, dated March 11, 1943, which modifies and completes the basic provision of March 7, 1938 regarding the verification of crop seed, several paragraphs of this provision are modified and two further paragraphs are added thereto. (*Ibid.*, S. 4-5).

* * * A Ministerial Decree of May 5, 1943 authorizes the importation, without certificate of origin and health and without phytosanitary inspection, of fruit dispatched as a present for the personal consumption of the consignee provided that the consignment does not exceed 15 kg. in weight. (*Ibid.*, S. 13).

* * * A Ministerial Decree dated March 15, 1943 permits up to April 30, 1943 the import of carnations (cut flowers) from Italy, Denmark and the Netherlands. (*Ibid.*, S. 13).

* * * A Ministerial Decree dated May 8, 1943 facilitates the importation into Germany of plants, parts of plants and plant products from occupied Netherlands territory. (*Ibid.*, S. 11).

* * * A Ministerial Decree of May 13, 1943 allows the importation of carnations (cut flowers) from Denmark up to November 15, 1943. (*Ibid.*, S. 13).

Germany (Alsace). — By Ordinance of February 3, 1943 relative to the control of the Colorado beetle [*Leptinotarsa decemlineata*] the planting of potatoes in plots composed of less than five rows is prohibited.

Intercalating potato plants or isolated rows among other crops and vice versa is also prohibited. (*Reichs-Planzenschutzblatt*, Berlin, Juli 1943, 1. Jahrg., Nr. 1, S. 3).

Germany (Protectorate of Bohemia and Moravia). — Ministerial Ordinance No. 91 of March 3, 1943 contains protective measures against the San José scale (*Aspidiotus perniciosus*) in the case of importation and transit. A list is given of the countries from which the importation of plants and parts of plants with the exception of seed, as well as packing material, is prohibited. The import of fresh fruit from regions infested with the San José scale is permitted provided that no insects are found on the fruit or among the wrappings. Transit without inspection of a consignment from territories infested with the San José scale is allowed on condition that the articles are dispatched in trucks or wrappers not damaged in any way and well closed. (*Reichs-Pflanzenschutzblatt*, Berlin, Juli 1943, 1. Jahrg., No. 1, S. 12).

* * * Ministerial Notification No. 162 of March 6, 1943 supplements Notification No. 1162 of December 28, 1942 [see this *Bulletin* 1943, No. 4, p. 57] which contains a list of the preparations authorized for seed disinfection. (*Ibid.*, S. 5).

* * * By an Ordinance dated March 11, 1943 the provisions in force [see this *Bulletin* 1940, No. 11, p. 214) relative to the protection of fruit and viticultural crops have been modified and completed. (*Ibid.*, S. 4).

* * * By virtue of Ministerial Notification No. 382 (Chem. 70) dated March 13, 1943 on the regulation of the sale of preparations for the control of plant diseases and pests, the plant protection bureaux are replaced by the district authorities. The Notifications No. 233 (Chem. 39) of January 6, 1932 [see this *Bulletin* 1942, No. 4, p. 56], No. 254 (Chem. 42) of February 25, 1942 [see this *Bulletin* 1942, No. 6, p. 90] and No. 300 (Chem. 55) of July 16, 1942 [see this *Bulletin* 1942, No. 11, p. 158] are repealed. (*Ibid.*, S. 5).

Germany (Prussia). — An Ordinance of February 14, 1943 relative to the control of suckers [*Psylla*], scale insects and other pests of fruit trees, introduces in the Minden district provisions similar to those laid down in Saxony by the Ordinance of January 20, 1943 [see this *Bulletin* 1943, No. 4, p. 58]. (*Reichs-Pflanzenschutzblatt*, Berlin, Juli 1943, 1. Jahrg., Nr. 1, S. 2).

Germany (Sudeten Territory). — By Ordinance dated April 26, 1943 the destruction of thistles (*Cirsium arvense*) and hoary cress (*Lepidium draba*) is made compulsory.

In regard to the clearing of thistles, rules similar to those adopted by Decree of October 30, 1941 in the Stade district (see this *Bulletin* 1942, No. 2, p. 23) have been laid down.

Hoary cress should be cut or pulled up during the flowering season (May-June) so as to prevent seed formation. (*Reichs-Pflanzenschutzblatt*, Berlin, Juli 1943, 1. Jahrg., Nr. 1, S. 3).

Germany (Occupied Eastern Territories). — Ordinance of February 14, 1943 relative to the control of virus diseases of the potato prescribes that with a view to controlling the peach gray aphis (*Myzodes* [*Myzus*] *persicae*), vector of severe virus diseases of the potato, all peach and apricot trees must be removed before the end of the month following publication of this ordinance.

Exemptions are permitted. In this case, all stunted and sterile peach and apricot trees have to be removed and the remaining trees sprayed with carbolineum and a nicotine and soap emulsion.

[For like provisions regarding the districts of Marienwerder and Dantzig see this *Bulletin* 1941, No. 5, p. 94].

From the beginning of 1944 the cultivation on any farm whatsoever of potato varieties infected with latent virus disease, a list of which is given, is prohibited. (*Reichs-Pflanzenschutzblatt*, Berlin, Juli 1943, 1. Jahrg., Nr. 1, S. 3-4).

Spain. — By ' Orden ' of July 9, 1943, the ' Ordenes ' of July 11 and November 12, 1942 [see this *Bulletin* 1942, No. 9, p. 122 and 1943, No. 1, p. 7] relative to the organization of locust control, remain in force.

It has been decided at the same time to apply to other noxious Orthoptera the precautionary and surveillance measures advocated against locusts. (*Boletín Oficial del Estado*, Madrid, 13 de julio de 1932, año VIII, núm. 194, pág. 6780).

Italy. — Ministerial Circular No. 181 of April 26, 1943 authorizes the capture and hunting of the sparrow by any means whatsoever with a view to protecting farm crops. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 1-11 maggio 1943, anno XV, n. 13-14, pp. 546-547).

* * * Ministerial Circular No. 199 of May 26, 1943 establishes the rules of an administrative nature to be observed in granting phytosanitary certificates. (*Ibid*, 11-21 giugno 1943, n. 17-18, pp. 781-786).

* * * By Ministerial Decree dated August 20, 1943, the boar is included among the noxious animals in the restocking and hunting zone of Bracciano, Province of Rome. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 27 agosto 1943, anno 84°, n. 199, pp. 2700).

The Netherlands. — Decree No. 4906 of May 11, 1943 ('Colorado-keverbesluit 1943') carries new provisions for the control of the Colorado beetle (*Leptinotarsa decemlineata*). (*Nederlandsche Staatscourant*, 's-Gravenhage, 11 Mei 1943, n° 90, blz. [1]- 2).

* * * Decree N. 6008 of June 21, 1943 lays down the rules to be followed in the control of the potato eelworm (*Heterodera rostochiensis* = *H. schachtii solani*). (*Ibid.*, 21 Juni 1943, n° 117, blz. 5).

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